

19. *HORNE's new preparation of the Acetum Opii Sedativum.*—Take three times the quantity of the best opium, reduced to fine powder, that is ordered by the London Pharmacopœia for two pints of tincture; add to the opium two pints of dilute acetic acid; after they have digested a few hours, add to them six or eight pints of rectified spirits of wine; macerate about seven days, then carefully filter, in order to separate the insoluble parts of the opium. Introduce the liquor into a retort, accurately closed, and distil off the spirit. The product in the retort, after the spirit has all passed over, is the required *acetum opii sedativum*.

If the distillation be carefully conducted, the result will always prove of one uniform strength — 1 m. equivalent to iijm. tincture opii, and free from spirit, and will keep unchangeable for an indefinite time. The *acetum opii sedativum* will be found the same, or very similar, to Mr. Battley's liq. opii sedativus (except in the strength, which latter falls short, according to the opinion of our most able experimentalists, as nearly j. to ij. instead of j. to iij.) a preparation too well known to require describing, except in regard to its mode of formation, which the preparer, in spite of his ranking as a scientific druggist, has hitherto kept a profound secret: should this slight effort of mine be the means of eliciting that secret, my object, in part, will be attained.

The rationale of the process may be briefly stated as follows. The acetic acid unites with the morphia of the opium, and forms an acetate of morphia, which is held in solution by the diluted acid; the remaining ingredients of the opium, acted on by the rectified spirits of wine, are extracted, and detained by the acid, after the spirit has been distilled over. I shall be happy to give a full description, if required by any of your numerous correspondents, should the subject be considered of sufficient interest to be allowed to excite inquiry in your useful and scientific journal.—*London Medical Gazette*, Jan. 17, 1835.

## THERAPEUTICS.

20. *Diabetes Mellitus cured by Kreosote.*—Professor BERNH, having been unsuccessful in his treatment of seven cases of Diabetes mellitus, by the various methods recommended by authors, was induced to try in the eighth, the kreosote. The following are the particulars of this case, as given in *Kleiner's Repertorium* for 1835.

The patient was a man, fifty years of age, ill for the last sixteen months; he passed daily seven Berlin quarts of turbid urine, sweet to the taste and smell, and containing a good deal of sugar; the patient was feeble, his appetite very great, and he was tormented by constant thirst; his sleep was disturbed by the frequent necessity of making water, but he had no hectic fever. The treatment was commenced by administering a vomit, which brought away some acid-smelling matters. Rollo's plan of treatment was then employed for some days, and ipecacuanha was given in small doses; this produced no good effect, and instead of the ipecacuanha, eight drops of kreosote were administered in the form of pill every day. The quantity of urine now excreted diminished to three, two and a half, and two quarts per day. It appeared at first to contain a large proportion of alkalies, particularly ammonia, and remained troubled. The dose of the kreosote was gradually increased, and after three weeks Rollo's regimen was abandoned on account of the disgust it excited in the patient. At this time the urine gave the odour of horse's urine, contained less sugar, and exhibited the first traces of urea, though it continued still turbid. Under the common diet and increased doses of kreosote, the urine diminished to two or one quart and a half; it was occasionally clear, gave an acid reaction; the quantity of sugar became daily less, and that of urea greater. After some time the patient's state was evidently improved. He now took twenty-four drops a day, his appetite was good, and his thirst much less, and the urine flowed at from one and a quarter to one quart and three quarters per day. In a few days more it assumed a natural colour, contained all the ingredients of normal urine, and ceased to give any trace of sugar.

21. *Principles of Treatment of Neuralgic Affections.* By WM. STOKES, M. D. (Extracted from his lectures on the Theory and Practice of Medicine.)—In en-

tering on the principles which should regulate the treatment of neuralgic diseases, I have to remark, that they are but slightly modified by their situation; in fact, it may be asserted generally, that the same principles of treatment apply, no matter where the disease may be situated. But are we to consider this subject as totally apart and having no connexion with the occurrence of inflammatory or organic disease? If we did so, we should get but a limited and erroneous view of the matter. I have told you before, that, in long-continued cases of functional disease, organic alterations were very apt to take place. The reverse of this proposition also is true, that organic affections may precede an attack of nervous symptoms; in other words, you may have cases presenting, at first, phenomena amenable to antiphlogistic treatment, and yet a period will arrive when new symptoms occur, and this mode of treatment will be no longer applicable. This is of importance in the practice of medicine, for if, in such a case, you persevere in the use of depleting measures, you will effect nothing towards the removal of distressing symptoms, and may do your patient's constitution much injury. A common example of this is, where a person receives some local injury, as for instance, a blow on the cheek. This is followed by all the symptoms of inflammation, as pain, swelling, heat, redness, &c. Well, then, you have a case of local inflammation to deal with, and you must treat it as such. But a period may arrive when the heat, swelling, and other symptoms of an inflammatory affection subsiding, the pain alone continues. Here the pain may be purely nervous; and if you were to go on leeching, purging, and depleting your patient, you would not only lose your time, but, in all probability, do mischief. Here, as in many other cases, we have local inflammation followed by an active neurosis. You remember, when speaking of hepatitis, I remarked that many persons were subject to pains in the region of the liver, *independent of any known organic disease*. I also drew your attention to the fact, that after the symptoms of a hepatitis are removed, the pain sometimes continues, having no longer any connexion with organic disease, and taking on the character of a neurosis. You will see of what importance this is when you reflect on the mischief done to such patients by persevering in bleeding, blistering, and the use of mercury, when the disease is amenable, not to this, but to a plan of treatment calculated to remove the neuralgia of the liver. It is the same thing with respect to the mamma, injuries of which are frequently followed by severe neuralgic affections. In the case of the heart, it sometimes happens that, after an attack of pericarditis, the patient will be subject to pain in that region, which may continue for years. Dr. Bright gives a very remarkable case of neuralgia which supervened on the disappearance of a cutaneous affection. All these facts tend to show, *that the mere pre-existence of local inflammation in any individual case does not prove that the pain is not neuralgic*, and hence it is plain, that in such a case it might be improper to persevere in the treatment used for local inflammation. This persisting in the taking of a neuralgic pain for the continuance of inflammatory or organic disease is a common error, and often productive of the most frightful consequences. Without a careful consideration of such cases, you will fall constantly into error. Never forget that although neuralgia may be the first and sole affection, yet, that it is often combined with organic disease, which it may precede, accompany, or follow.—*London Med. & Surg. Journ.* 27 Sept. 1834.

22. *On Hemisrania*. By Wm. Stokes, M. D.—One of the most common forms of neuralgia, which you will meet with in private practice, is what has been termed *Hemisrania*, the chief symptom of which is violent pain in one side of the head and face. The symptoms are exceedingly violent; there is a high degree of exaltation in the sensibility of the surface of the face; the eye is exquisitely sensible to light, and the ear to sound. The patient is very much prostrated, and his spirits depressed, and the slightest cause is sufficient to bring on an attack of pain. In some cases the pain is constant, in some remittent, in others intermittent. The sensibility is deranged only at one side of the head and face, and the pain seldom extends beyond the median line. As far as we know of this affection, it seems to depend on some morbid state, either of the sentient extremities of the fifth nerve, or of that portion of the brain which receives its impressions.

In cases of hemisrania we may have symptoms existing elsewhere, and this leads us to the consideration of the exciting causes. These will be often found

to depend on deranged digestion. Here the irritation is reflected through the sympathetic system to the brain and sentient branches of the fifth pair, for there exists between these two nerves a very close and remarkable sympathy. Thus we frequently observe, that the *doloureux*, as well as hemicrania, are the result of some injury or irritation of those parts to which the ganglionic nerves are distributed. In treating a case of hemicrania, then, you must inquire whether there be any visceral irritation present, and remove it as soon as possible. You must also carefully inspect the teeth and gums, for a carious tooth or a diseased gum, will prove the exciting cause of an attack. I have seen many cases of hemicrania where the patient was subjected to a variety of treatment without success, and where complete relief was obtained by the simple process of extracting a carious tooth. It is a very curious fact, that in those instances the pain was referred, not to the diseased tooth, but to the whole surface of the face. Cases of this kind are given, in which the pain lasted for many years, resisting every form of treatment, and were afterwards cured by the extraction of a decayed tooth. There is one circumstance in these cases which is very apt to mislead, and this is, that the pain is often not referred to the tooth; and relief, to a certain extent, is obtained by the use of narcotics and carbonate of iron. This, however, should not lead you to think that the disease has no connexion with the state of the tooth and gum; and this fact is illustrative of a most important principle, viz. *that temporary relief by a purely anti-neuralgic treatment does not prove that no organic origin exists.* How often has hysteria depended on local disease, and the practitioner been misled by the temporary relief afforded by antispasmodics. I have seen the most melancholy examples of this, and have more than once been misled myself.

With respect to the remedies most generally employed in the treatment of hemicrania, they are chiefly preparations of arsenic, iron, sulphate of quinine, and opium. Of these, the recently precipitated carbonate of iron appears to be the best, indeed, its success is frequently heroic. In proof of this you will find several very interesting cases detailed by Mr. Hutchinson in his excellent work. The best way of giving it is to combine it with an aromatic and a laxative; a small quantity of the *pulv. cinnamoni comp.* a few grains of rhubarb, and fifteen grains or a scruple of the carbonate of iron, will form a powder which may be given two or three times a day with advantage. It has been asserted, that the carbonate of iron is suited for fixed, and not for intermittent cases of neuralgia; I have found the contrary to be the fact. I had lately a lady under my care, who, in attempting to remove some furniture, received an injury by striking her cheek against a chest. She was treated for six weeks with purgatives, local bleeding, and mercury; the swelling, heat, and redness of the part went off, but the pain remained, being regularly intermittent, and occasionally very severe. This lady was perfectly cured by a tonic regimen, and the carbonate of iron, in scruple doses, three times a day. The sulphate of quinine has been proposed as being peculiarly adapted for intermittent cases; it will sometimes succeed, but I have known several cases where it completely failed. I grant that the character of intermission would naturally induce a practitioner to have recourse to it, but I have known so many instances of its failure, in purely intermittent neuralgia, that I give a decided preference to the carbonate of iron; I recollect the case of a gentleman who for six weeks had daily attacks of terrible hemicrania. When the attack came on, he was obliged to remain perfectly motionless, the tears streamed from the eye of the affected side, the ear was exquisitely sensible to the slightest sounds, and he remained in a state of intolerable suffering for some hours. For the space of six weeks he took quinine in enormous doses without any improvement, and was ultimately obliged to give it up as useless. I have seen the same result in a great many cases, and as far as my experience goes, I would not place much reliance on quinine, even where the attack was of a purely intermittent character. I have seen some cases indeed, where it has done good, and you may try it; but if after three or four full doses, you find there is no improvement, you may be almost sure that it will prove useless. When it succeeds, one of the first effects produced by it is to put back the paroxysm for an hour or two, just as occurs when it is successfully given in a case of ague. But I feel certain, that if it is likely to succeed, its beneficial effects will be seen in the course of a few days, and to persist for weeks in using it is not only un-

necessary but improper. In the very remarkable ease to which I have just alluded, the gentleman after having tried quinine without the slightest improvement for six weeks, was suddenly and completely relieved by a full dose of opium. At night, on retiring to rest, he took a strong opiate, awoke in the morning refreshed and free from pain, and has continued from that time to the present (a period of ten years) without any symptom of hemiparesis. Dr. Mackintosh says that the sedative solution of opium, or the acetate of morphia, are the best remedies for this disease he is acquainted with, and that he has seen many cases where they succeeded, after every thing else had failed. You may also employ in such cases the external use of narcotics with great advantage, of which one of the best is the extract of belladonna. If you prescribe a liniment composed of a drachm of the extract of belladonna, with an ounce of the compound camphor liniment, you will have a powerful remedy, and one, which when applied to the surface of the affected parts, will often produce great relief. I have sometimes used the acetate of morphia in the endermic mode, by putting on a small blister, and leaving it on until vesication was produced, when the raised cuticle was cut away with a pair of fine scissors, and the surface dressed with an ointment composed of a drachm of lard, and from a grain to a grain and a half of the acetate of morphia. I remember two cases of intermittent hemiparesis which yielded to this treatment. You will also frequently derive benefit from the internal use of stramonium and belladonna. There are many other remedies used for this purpose, but I shall not detain you any longer on this part of the subject; it will be sufficient to remark that the carbonate of iron, sulphate of quinine, and opium, externally and internally, are the remedies on which the most reliance is to be placed.—*Ibid.*

23. *On Tic Douloureux.* By WM. STOKES, M. D.—This is one of the most melancholy and harassing affections to which the human frame is liable; in some instances the poor sufferer, after having lived for years in a state of exquisite misery, is at last worn out by the intensity and persistence of his agonies. Such was the fate of the late celebrated but unfortunate Dr. Pemberton. A great deal of light has been thrown on the nature of this affection by the researches of Sir Charles Bell. He seems to have succeeded in establishing several points connected with the nature and seat of this affection, one of the most important of which is that the seat of this disease is in the sentient branches of the fifth pair of nerves, and not, as it has been supposed, in the portio dura. He has shown pretty clearly that the portio dura is the nerve which regulates the muscular motions of the face, producing all those modifications of features which we call expression, and also peculiar motions or changes connected with certain states of respiration, in a word, that it is the expressive and respiratory nerve of the face. It is, according to him, never the seat of tic douloureux, and the practice of dividing it for this complaint, is as unscientific as unsuccessful. The division of the portio dura in such cases, not only fails in giving relief, but also entails disgrace on the practitioner, and disfigurement and misery on the patient. *Its effect is paralysis of the muscles of one side of the face, and great distortion*, without the slightest relief. Yet it is a melancholy fact that such operations have been performed. Sir C. Bell's researches, however, have put an end to this malpractice, for he has shown that the fifth nerve is that which supplies the face with sensation, and that it is in its branches the disease is situated. We are then, I think, to look upon this disease as a neurosis situated in the expansions of the facial branches of the fifth pair of nerves. Sir C. Bell relates a very remarkable case, in which the patient had suffered from a series of dreadful attacks, the pain coming on in violent paroxysms. From the accounts given by this patient, and from personal observation, he says, that one could trace with anatomical precision the course and direction of the branches of the fifth nerve, for on the recurrence of an attack of pain, he applied his fingers to his face, and made pressure on the foramina where the different branches of the fifth nerve issue. Having done this, he would press the nerves with all his force, and remain in a fixed posture while the paroxysm continued.

Sir Charles Bell's idea with respect to the cause of this disease, is, that it generally depends on some visceral irritation reflected through the sentient branches of the fifth pair of nerves.

I have told you that this disease is one of the most melancholy affections to which man is subject, it is also one of the most obstinate. A vast number of remedies have been employed or proposed for its treatment, and this affords an illustration of the fact, that the more incurable a disease is, the more extensive is the list of its remedies. A few only are deserving of attention, and these I have already mentioned when speaking of bemicrania, namely, the preparations of arsenic, iron, quinine, and opium. Where these fail after a full trial, Dr. Bright looks upon the case as hopeless. Narcotics in every form and of every description have been employed both externally and internally, but to all these the same remark applies; many of these remedies will give temporary relief, and the physician will flatter himself on the prospect of a favourable termination, but in a short time he is annoyed at finding that the disease has returned and left the patient as bad as ever. Many a time have I seen a poor sufferer excited by hope on receiving temporary alleviation from the use of arsenic or iron, and sinking into despair, when he found that his torturing malady returned, and that the remedies which on the first trial gave relief, on a second proved useless. The general principles which should guide you in your treatment are, first, to investigate carefully whether any visceral irritation exists, and remove it as far as possible, taking care at the same time to improve the general state of the patient's health, and the next thing is to allay the sensibility of the nerves of the part and avoid all exciting causes. In certain cases this disease appears to be connected with an affection of the brain, and this seems to be an explanation of the fact before mentioned, that in some cases, where all specific treatment had completely failed, relief has been obtained by shaving the head and applying ice to the scalp during the paroxysms. I have already mentioned to you a case in which this mode of treatment proved eminently successful. This is a curious fact, and one which being of practical importance, you should hold in memory.—*Ibid.*

24. *On a form of disease resembling Tic Douloureux.* By WM. STOKES, M. D.—We have a form of disease consisting of violent paroxysms of pain, apparently nervous, and in which no doubt the branches of the fifth pair of nerves are engaged; it is generally found to depend on a local cause, being connected with some disease of the bones of the face or skull, and bears a close analogy to tic douloureux. I have now witnessed several instances of this disease; in some cases it is produced by a carious tooth, in others by disease of the maxillary bones, and I have observed it to occur in one case of abscess of the antrum. The same thing has been observed by Dr. Bright, who gives an extraction of one of the bicuspids was followed by a gush of matter from the antrum and complete relief of the violent pain. I have also seen cases in which this affection appeared to be the result of disease of the lining membrane of the frontal sinus, of this also Dr. Bright gives an example. The case I witnessed was that of a lady, who got a dreadful attack, resembling hemiplegia, in consequence of being exposed to cold shortly after leaving a warm climate. She suffered the most violent agonies for some time, until one day she had a discharge of purulent matter from the nostrils, which was almost immediately followed by relief. This has recurred at intervals since that period, the pain ceasing when the discharge comes on, and returning when the discharge goes away. The pain is most intense, and situated in the direction of the frontal sinus, and running down along the side of the face; it is constant, and without any intermissions, returns upon the occurrence of any cause which checks the discharge, and is sometimes so excessive as to render her quite frantic. Whenever an attack comes on, she applies a number of leeches over the frontal sinus, then warm fomentations, and this has the effect of bringing on the discharge and giving relief. In a conversation which I had with Mr. Crampton on this case, he stated to me that he had met with two similar ones, and that he had succeeded in accomplishing a perfect cure by inserting a large caustic issue over the top of the head. I accordingly advised my patient to have the same thing done. She has since that time left this country; but previous to her departure I certainly observed an improvement in her symptoms, and the principle of treatment appears to be perfectly rational.—*Ibid.*

25. *Pulmonary Hemorrhage Treated with Ergot.* By DR. DUJANTE DE CASERTA.—A child, aged 12 years, of sanguine temperament, good constitution, but already

in the habit of drinking wine, was attacked with colic. His father, without the advice of a physician, gave him an emetic, and, during his efforts in vomiting, copious hæmoptysis took place. Dr. Duranle was called to visit the patient, and found him in the following condition; face flushed; expectoration of flocculent blood when coughing; pulse high and febrile. The doctor ordered a copious venesection and iced drinks, acidulated with mineral acids, to arrest the hæmorrhage. These remedies were successful, but on the following day the hæmorrhage was renewed with much greater severity, and it returned at every attack of coughing; alternating with epistaxis. M. Duranle then prescribed half a drachm of the powdered ergot, to be divided into six doses, one to be administered every two hours. After this medicine had been taken, the hæmorrhage stopped, and did not return, the pulse abated and in a short time there only remained the symptoms of the catarrhal affection. Another dose of ergot was administered to ensure the cure; then some purgative medicine, cooling drinks, and an opiate at night rendered the cure complete.

25. *Amenorrhœa*.—Dr. SCHÖNLEIN, late Professor of Medicine at Würzburg, is of opinion that an injection of aloes; (ten grains in a small quantity of warm water,) thrown up the rectum at the time when the menses ought to make their appearance, is more certain in its effects than any other emenagogue.

26. *Digitalis a specific for Delirium Tremens*.—Dr. CLESS, of Wurtemberg, states, that he has found digitalis purpurea to be specific in the treatment of delirium tremens. Of 13 cases of this disease, in which he administered the remedy, all but two recovered; these two had a relapse. The digitalis was given in strong infusion, in doses of a spoonful every two hours. After symptoms of narcotism have made their appearance, recovery ensues.—*Med. Correspond. Blatt und Gaz. des Hôpitaux*.

27. *Spirits of Turpentine in Enema, as a Cure for Sciatica*.—Dr. DUCROS, Jr. of Marseilles, in an article in *La Lancette Française*, (Sept. 15, 1835,) lauds the efficacy of the spirits of turpentine, administered in enema for the cure of sciatica. He gives the turpentine in large doses, from one ounce to two ounces and a half, mixed with the yolk of an egg and vegetable mucilage. He does not state at what intervals the enema is to be repeated: but several seem to have been administered in some cases before relief was obtained.

28. *Poisoning by Arsenic cured by the Hydrated Tritoxide of Iron*.—A remarkable case of this description is recorded in the *Gaz. Med. de Paris* (22 Aug. 1835,) by M. MOXON. The subject of it was a hair-dresser, 35 years of age, who, in a paroxysm of delirium tremens, swallowed a drachm and a half of white oxide of arsenic. Half an hour afterwards the antidote was given to him, suspended in water, and he drank in twelve hours all the tritoxide produced by the decomposition of five ounces five drachms of the trito-sulphate of iron. He had no violent colic, and twenty-four hours afterwards experienced scarcely any uneasiness even.

29. *Leucorrhœa Cured by Colchicum*.—Dr. RITTON recommends the following pills for the cure of leucorrhœa:—R. Pulv. colchii. autumn. gr. iij.; sapon. med. q. s. fit pilul. Three of these are to be taken daily, and the dose increased to five or six. The mean term of cure is ten days. During the treatment the patient must abstain from fermented and alcoholic drinks.—*Jour. Conn. Med. Chirurg.* Aug. 1835, from *Gazzetta eclettica de Vêrone*, April, 1835.

30. *Soda, a remedy for Tooth-ache*.—J. S. GASKOIN, Esq. in a communication to the *London Med. Gaz.* (7 Feb. 1835,) states that tooth-ache may be effectually relieved for many hours by carefully filling the cavity of the decayed tooth with the powdered carbonate of soda. It does not seem to lose its efficacy by frequency of application.

31. *Pommade for the Cure of Itch*.—Dr. EMERY, in an article on the itch, in the *Bulletin Général de Thérapeutique* for May last, highly extols the efficacy of

the following pommade for the cure of that disease. Take of brown soap one ounce; table salt half an ounce; sulphur half an ounce; alcohol one drachm; vinegar two drachms; chloride of lime half a drachm. One fourth to be used in friction, morning and evening, to the hands and feet. He states he has cured by it in the hospital St. Louis more than twelve hundred patients; many of them in four or five days, others in ten, twelve, or fourteen days; the mean period of treatment not exceeding eight days. It has the advantage of never causing any accidents, or eruptive diseases; of not soiling the clothes; of not making the atmosphere of the wards unpleasant; of curing the disease in a short time, and being a very cheap remedy.

32. *Pommade for the cure of enlarged tonsils.*—Dr. CERCHIARI, in a communication in the *Bull. delle Scienze Med. de Bologna*, May, 1835, extols the efficacy of the following ointment, in the cure of enlarged tonsils, caused by repeated attacks of inflammation:—℞. Iodin. pur. ℥j. Uag: Ros. ʒj. m. To be applied to the tonsils morning and evening, by means of a small brush. By the end of two months these glands will, he asserts, under this application, return to their normal size. It is necessary that the inflammation should be entirely subdued before recourse is had to this ointment.—*Journ. de Conn. Med. Prac.*, Aug. 1835.

33. *Hemoptisis cured by Kreosote.*—Dr. SENTINE has reported in the *Gazetta di Terapentica de Verone*, for March, 1834, a case of profuse hemoptisis, recurring at short intervals, and occurring in a man forty years of age, in which a persevering antiphlogistic treatment, general and local bleeding, cutaneous irritation, and astringents, had been employed without success. Dr. S. administered the following potion:—℞. Muc. Gum: Arab ʒij. Kreosote gttv, Syr: Althææ ʒj. A spoonful of this mixture was given every three hours, and afterwards every two hours. After the first two doses, the orgasm and pain of the chest diminished, the respiration became freer. The quantity of kreosote employed was one drachm.

## OPHTHALMOLOGY.

34. *Amaurosis from Metallic Colic.* The *Archives Générales* for May, 1834, contains a memoir on Amaurosis from lead. The author M. DUPLAY, endeavours to establish the differences and analogies between amaurosis from lead, and the amaurosis which is found in some instances to accompany a nervous colic, the symptoms of which strongly resemble the lead colic; though they clearly do not depend upon the same cause. To this end M. Duplay first gives cases from former Nos. of the Journal in which he writes, from Aadræ's Clinique, and from his own experience, illustrative of amaurosis from lead colic; and others quoted from Felix Plater, Henry Smetius, Hildanus, Lucas Stoerck, &c., descriptive of the attack of amaurosis in nervous colic; a case, however, which he observes is sufficiently rare. Reasoning from these he comes to the following conclusions:—

1. The amaurosis which succeeds metallic colic, or nervous colics resembling it, is peculiar in the sudden and almost instantaneous manner of its attack; the patients losing all vision, and becoming incapable of distinguishing night from day in a few hours.

2. It commonly shows itself after several attacks of colic, but may occur in the first, just as do other derangements of innervation in persons having those seizures.

3. In the majority of those seized with amaurosis, this symptom is preceded by other nervous disorders, as pains of the arms, cramps of legs and belly, &c.; as also by palsy of the fingers, and more commonly still by epileptiform attacks and delirium. At other times it appears alone, and is only succeeded after some time by nervous symptoms.

4. When the patient is in a complete state of blindness, the pupil, on examination, is found to be considerably dilated, and utterly immovable. M. Duplay says he has not recognised the character of metallic amaurosis mentioned by